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**Reference:     Section 106 Technical Memorandum for the proposed 5<sup>th</sup> Avenue Gate Reopening & MFA Access Improvements Project**

Stantec Consulting Services Inc. (hereafter Stantec) has prepared this memorandum on the behalf of Planetary Ventures (PV), which has entered into an Adaptive Reuse Lease with the National Aeronautics and Space Administration (NASA) for the Ames Research Center Eastside/Airfield area at Moffett Federal Airfield (MFA). PV is proposing to reopen an existing gate to increase access to the eastern perimeter of MFA. The existing gate is located at a T-intersection of Macon Road and 5<sup>th</sup> Avenue, which connects with neighboring Sunnyvale, California. Proposed work includes construction of a security checkpoint and associated circulation improvements to successfully reopen the 5<sup>th</sup> Avenue gate. All work associated with the proposed project will be referred to as the “Undertaking.”

As the lead federal agency, NASA is responsible for compliance with Section 106 of the National Historic Preservation Act of 1966 (NHPA), which requires federal agencies to assess activity effects on historic properties. This memorandum addresses the requirements of Section 106 of the NHPA, per 36 CFR Section 800, to assess the potential of adverse effects of the Undertaking on historic properties. It includes a description of the Undertaking, the establishment of an appropriate Area of Potential Effects (APE), the identification of all historic properties within the APE, and an analysis of potential adverse effects based upon the established Criteria of Adverse Effects.

## DESCRIPTION OF THE UNDERTAKING

The Undertaking involves the reactivation and reopening of the 5<sup>th</sup> Avenue point of entry to MFA to alleviate current traffic congestion at the Ellis Street interchange and security checkpoint. The existing point of entry is located on the east perimeter of MFA, directly east of Macon Road and the California Air National Guard (CAANG) Cantonment Area (see Appendix A, Figures 1 & 2). Currently, the gate is only used at select irregular times and could be reopened with added security improvements to increase access to MFA during typical weekday business hours, particularly for the Google Bus fleet that currently utilizes the eastern side of the airfield. The majority of the Undertaking location is undeveloped and defined as open space (see Appendix B, Site Photographs).

At the 5<sup>th</sup> Avenue entrance, the existing pavement will be replaced and widened to accommodate three lanes of automobile traffic. The checkpoint will be shifted to the north away from the immediate 5<sup>th</sup> Avenue point of entry. Upon entering the MFA property at 5<sup>th</sup> Avenue, the dual automobile lanes, each 14’ wide, will turn north and continue parallel to Macon Road and the eastern property boundary for approximately 700’ towards a security checkpoint; an exit lane will be located directly north adjacent to the dual entry lanes and extend from

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the north towards 5<sup>th</sup> Avenue, making for a total of three automobile lanes. At the checkpoint, the entry lanes will diverge around a painted median with a single-story guard station.

The guard station is a simple, single-story structure that will be approximately 10' long, 4' wide, and a maximum height of 12'. It will be constructed on a concrete foundation measuring 13' long, 7' wide, and reaching a below grade depth of 1.5'. The station will be comparable to others found throughout the site with reinforced concrete construction, a simple stucco veneer, feature either a flat or simple hipped roof with standing seam metal and elongated eaves, expanses of security glazing at the front and rear facades, and glazed sliding doors on both of the side facades. The guard station, which will operate during daytime hours, will be powered by roof-mounted solar panels complemented by a battery storage unit integrated into the guard station rear façade. New telecommunication connections will be installed to the nearest active point. The exact distance of the proposed new telecommunications is to be determined, but existing conduits will be utilized where feasible. If new conduit banks are required, these will be installed either via open trenching or horizontal directional drilling (HDD), depending on the guard station siting and the existing conditions. For open trenching construction, the required trench will be dug approximately 4' deep and 2' wide, whereas the HDD method will include a 1' wide bore path at a depth of 10' below grade.

Additional improvements associated with the guard station includes installing new lighting poles and traffic security bollards. The light poles will feature mounted security cameras and reach a potential maximum height of 30'; new footings will be constructed with an approximate depth of 5' below grade. The traffic bollards will be strategically arranged in front and behind the guard station. They will be typical cylindrical post bollards with an above ground height of approximately 3' and concrete footings set 3' below grade. Wayfinding and other security signage will also be included on the approach to the station.

North of the guard station, across from one of the entry lanes and the one exit lane, will be a squared-off paved shoulder area that will serve as NASA security parking and as a vehicle turnaround location. On the south side, the shoulder will be increased to allow for a vehicle inspection area that will accommodate up to three vehicles.

After the checkpoint, the entry and exit lanes will shift west and connect with a large roundabout, which will be located at the existing intersection of E. Patrol and Macon Roads. This roundabout will primarily feature a single 18' wide traffic lane and will provide entrance and exit points to Macon Road, E. Patrol Road, the existing Fuel Farm Facilities, and the new 5<sup>th</sup> Avenue checkpoint road. The dual entry lanes from the 5<sup>th</sup> Avenue checkpoint will provide northbound access to connect along Macon Road. One lane will connect within the traffic roundabout, whereas the other will bypass slightly to the north, directly adjacent to the existing Fuel Farm Offices Building. The center of roundabout will have a 90' diameter and will feature modest landscaping. A 12' wide truck apron will encircle the central portion of the roundabout, separating it from the traffic lanes. Pedestrian traffic will be directed along the southside of the traffic circle and slightly separated from the automobile lanes with intermittent curvilinear crosswalks extending across Macon Road, the 5<sup>th</sup> Avenue checkpoint road, and E. Patrol Road.

A new stormwater culvert system will be constructed underneath the traffic roundabout, extending from the CAANG entrance area towards the northeast and south areas of the site. The existing stormwater retention swale will be regraded alongside the traffic circle and southwards along the new circulation infrastructure and property boundary. A new retention swale will also be graded directly south of the traffic roundabout.

Pedestrian access improvements will include a 10' wide pedestrian sidewalk that begins on the MFA property at the 5<sup>th</sup> Avenue entrance. The sidewalk will then shift north alongside the southern entry lane. Upon passing through the checkpoint, the sidewalk will shift west and lead towards a painted crosswalk that will extend

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behind the guard station, through the north shoulder and vehicle turnaround, and continue across the existing open space towards Macon Road.

Additionally, Macon Road will create a left turn pocket on southbound Macon Road for outbound traffic turning through the reopened 5<sup>th</sup> Avenue exit, as well as a widened right turn lane on the northbound lane of Macon Road on the approach to 5<sup>th</sup> Avenue.

A new security perimeter fence will be installed within the MFA boundaries and will enclose the area leading from the 5<sup>th</sup> Avenue opening, north along Macon Road towards the checkpoint. This fence will match the existing 6' high, chain-link perimeter fence and will require new concrete footings with an approximate depth of 3' below grade. New chain-link manual swing gates will be installed along the new alignment: several 14' long swing gates will be installed at the checkpoint to control entry and exit traffic during opening hours, and a single 24' long gate will be installed at the intersection of 5<sup>th</sup> Avenue and Macon Road for increased exit capacity on an as-needed basis. Gate operation will be limited to daytime business hours. The existing perimeter fence will remain.

## AREA OF POTENTIAL EFFECTS

The APE is primarily located within the expanded Naval Air Station (NAS) Sunnyvale Historic District on the eastern-most side of MFA. The APE includes a portion of the CAANG Cantonment Area as well as select portions along 5<sup>th</sup> Avenue and Enterprise Way in Sunnyvale, California (see Appendix A, Figure 2). For the current Undertaking, the APE is centered along Macon Road and the adjacent lands along the eastern perimeter of MFA where work is proposed.

The eastern boundary is largely defined by the fenced MFA property line, alongside Enterprise Way. At the intersection of 5<sup>th</sup> Avenue and Enterprise Way, the APE boundaries extend a city block east and south along the respective roads to account for the restriping and limited upgrades occurring along those roadways. The southern boundary extends west from Enterprise Way through the CAANG Cantonment Area along Johnny Luv Lane. The west boundary extends north from Johnny Luv Lane at East Patrol Road and northwest at the north end of the cantonment area to include the existing fuel farm facilities west of Macon Road. The northern boundary extends from the fuel farm facility eastwards to include Building 545 before crossing east across East Patrol Road and terminating again at the eastern property line of MFA.

Vertical boundaries of 12' below grade are included to account for the potential disturbance of any archaeological resources where ground disturbing activities are proposed.

The location and size of the APE will account for both potential direct and indirect effects to any historic properties, particularly those located near the main improvements occurring along Macon Road and the eastern perimeter of the expanded NAS Sunnyvale Historic District.

## IDENTIFICATION OF HISTORIC PROPERTIES

Per 36 CFR Section 800.16(1)(1), "historic properties" may include any district, site, building, structure, or object that is listed, or eligible for listing, in the National Register of Historic Places (NRHP).

**Reference:** Section 106 Technical Memorandum for the proposed 5<sup>th</sup> Avenue Gate Reopening & MFA Access Improvements Project

## ARCHAEOLOGICAL

Ground disturbing activities are limited to the eastern side of Macon Road at and north of the existing closed 5<sup>th</sup> Avenue gate. The area was subject to an archaeological study in January 2017 as part of the previous Section 106 submittal for the MFA Electrical-Telecommunications Infrastructure project (California Office of Historic Preservation (OHP) Reference # NASA\_2016\_1227\_001). William Self Associates (WSA), the authors of the archaeology report, conducted a records search and survey of the area along the eastern shoulder of Macon Road for potential archaeological resources.<sup>1</sup> In addition to a pedestrian survey, investigative coring was conducted at six locations north and south of the subject Undertaking. All survey efforts and the subsequent report determined that there was no observable evidence of any archaeological materials in the area. However, the report also acknowledged that there is a possibility for materials, even though the likelihood is low. The report stated that although no known archaeological properties are in the project area, construction should be halted and NASA officials, such as the Procurement Officer and Cultural Resource Manager, shall be notified immediately should there be an inadvertent discovery of archaeological materials following the appropriate procedures. In a letter dated March 13, 2017, California State Historic Preservation Officer (SHPO) concurred with this assessment of No Adverse Effects for archaeological properties as it relates to the MFA Electrical-Telecommunications Infrastructure Project.

Additionally, in February 2017, AECOM prepared the *NASA Ames Research Center Archaeological Resources Study* (ARS), which identified potential archaeological resources throughout the NASA Ames Research Center, including MFA. The ARS is intended to support the NASA Ames Research Center's Integrated Cultural Resources Management Plan (ICRMP), which provides guidance for the treatment of cultural resources, both archaeological and built environment, on the NASA Ames property. The ARS, which was concurred upon by SHPO in a letter to the Historic Preservation Officer at NASA Ames Research Center on June 22, 2017, included a thorough collection of previous archaeological and geotechnical studies, previously recorded resources, historical maps, Sacred Land Files searches from the Native American Heritage Commission (NAHC), and other forms of documentation, to outline and identify the potential for archaeological resources throughout the site. Based upon these records, an archaeological sensitivity map was created that illustrates particular areas where archaeological properties are more likely to be extant. The identified areas of sensitivity are organized into four categories:

- Heightened Historic-era Archaeological Sensitivity
- Heightened Prehistoric-era Archaeological Sensitivity
- Heightened Geoarchaeological Sensitivity
- Low Archaeological Sensitivity

According to the ARS, the Undertaking is located entirely within an area of low archaeological sensitivity, meaning the previous documentation did not note any known archaeological resources in the area, and there is a notably low potential for any resources to be extant (see Appendix A, Figure 3).

For the limited areas of ground disturbing activities located in the City of Sunnyvale, directly east of the 5<sup>th</sup> Avenue gate at MFA, the records search conducted by WSA as part of the January 2017 archaeology report revealed that the intersection at Enterprise Way had previously been studied and that no known archaeological properties are located in the immediate vicinity of the limited Undertaking area. PV will inform all contractors about the appropriate inadvertent discovery procedures prior to any ground disturbing activities begin. In the event that an inadvertent discovery is made during construction along 5<sup>th</sup> Avenue and Enterprise

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<sup>1</sup> Since the time of authorship of the January 2017 report, William Self Associates was acquired and now exists under the name PaleoWest Archaeology.

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Way, work shall be halted, and City of Sunnyvale will be notified, as will the appropriate NASA officials. PV would work with the City of Sunnyvale planning staff to identify next steps and, potentially, prepare a treatment plan for the discovery. Additionally, Enterprise Way is private property and not owned by the City of Sunnyvale; all owning parties would also be notified of any inadvertent discoveries and all required actions following discussions with the City.

The combined findings of the February 2017 AECOM ARS and the January 2017 WSA study covers the current Undertaking area and recommends that the Undertaking is located in an area where there are no known archaeological resources, and low potential for any to be extant. Therefore, there are no known archaeological properties located in the proposed locations of ground disturbing activities within the APE.

## **BUILT ENVIRONMENT**

MFA is a complex property with a number of historical periods of developments and uses that span from the 1930s to present. As such, numerous studies of the historical significance of the built environment at MFA have been conducted. For the Undertaking and the identified APE, relevant studies focus on two primary areas of the larger MFA property: the expanded NAS Sunnyvale Historic District and the CAANG Cantonment Area.

### **Expanded NAS Sunnyvale Historic District**

In 2013, AECOM prepared the *Historic Property Survey Report for the Airfield at NASA Ames Research Center, Moffett Field, California* (HPSR), which identified the NRHP-eligible expanded NAS Sunnyvale Historic District that encompassed the entirety of MFA. The historic district is an expansion of the original NAS Sunnyvale Historic District, which was nominated and listed to the NRHP in 1994. The expanded district identified historical significance under criteria A (events) and C (architecture) with a period of significance spanning from 1930-1961. While the identified expanded NAS Sunnyvale Historic District has not been formally concurred upon, California Office of Historic Preservation (OHP) staff and NASA have agreed upon recognizing the identified historic district and its contributors as historic properties for the purposes of Section 106 consultation.

The Undertaking APE is almost entirely located within the boundaries of the expanded NAS Sunnyvale Historic District. None of the contributing properties to the district are located within the APE and are therefore not at risk of physical alterations or indirect effects, such as visual and atmospheric alterations. There is, however, potential for the Undertaking to indirectly affect general characteristics of the historic district's setting.

### **CAANG Cantonment Area & Cold War-Era Properties**

While the direct work associated with the Undertaking is located outside the boundaries of the CAANG Cantonment area, the identified APE extends over a portion of the property. Although not addressed in the 2013 HPSR, the CAANG Cantonment Area has been subject to several studies and surveys, including the 1999 *Inventory and Evaluation of Cold War Era Historical Resources, Moffett Federal Airfield, Moffett Field, California*, prepared by Alexandra C. Cole. This survey, which focused on Cold War-era properties, surveyed and evaluated Cold War-era buildings for potential significance and eligibility for listing on the NRHP. At the time of the survey, most buildings were less than 50 years old and did not meet the age threshold for listing to the NRHP and were evaluated under NRHP Criteria Consideration G: Properties that Have Achieved Significance Within the Past 50 Years. In recent years, buildings at the CAANG Cantonment Area have

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become at least 50 years of age and have been subject to additional evaluations for potential eligibility for listing on the NRHP per the regular criteria for evaluation.

The following table outlines the CAANG and other Cold War-era buildings located within the APE, dates of construction, relevant previous evaluation efforts, and current historic status.

**Table 1: Individual Buildings Located within the Undertaking APE and Historic Status**

<b>Building Name/ Number</b>	<b>Date Constructed</b>	<b>Previous Evaluations</b>	<b>Historic Property</b>
Aircraft Fueling Truck Fuel Racks (Bldg.141)	1952	<ul style="list-style-type: none"><li>Proposed contributor to expanded NAS Sunnyvale Historic District in 2013 HPSR</li><li>Found ineligible in 2016 by AECOM as part of the Section 106 effort for the Defense Fuel Point Closure Project; SHPO concurred, not eligible for NRHP.</li></ul>	No
Fuel Farm Offices (Bldg.545)	1973	<ul style="list-style-type: none"><li>1999 Cold War Survey found not exceptionally significant.</li><li>Not 50 years old, no additional evaluation required.</li></ul>	No
CAANG Guard Station (Bldg.600)	2012	<ul style="list-style-type: none"><li>Recent construction, not within 50-year threshold for NRHP eligibility.</li></ul>	No
CAANG Mission Support (Bldg.653)	1984	<ul style="list-style-type: none"><li>1999 Cold War Survey found not exceptionally significant.</li><li>Not 50 years old, no additional evaluation required.</li></ul>	No

As illustrated in the table above, none of the identified CAANG and Cold War-era buildings within the APE qualify as historic properties for the purposes of Section 106 consultation.

## ASSESSMENT OF EFFECTS

Per 36 CFR 800.5(a)(1), the Criteria of Adverse Effects are applied to assess potential effects of the Undertaking on historic properties located within the associated APE:

- (1) Criteria of adverse effect. An Adverse effect is found when an undertaking may alter, directly or indirectly, any of the characteristics of a historic property that qualify the property for inclusion in the NRHP in a manner that would diminish the integrity of the property's location, design, setting, materials, workmanship, feeling, or association. Consideration shall be given to all qualifying characteristics of a historic property including those that may have been identified subsequent to the original evaluation of the property's eligibility for the NRHP. Adverse effects may include reasonably foreseeable effects caused by the undertaking that may occur later in time, be farther removed in distance, or be cumulative.<sup>2</sup>

<sup>2</sup> U.S. Code of Federal Regulations, 36 CFR Section 800.5(a).

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Pursuant to 36 CFR 800.5(a)(1), adverse effects occur when an undertaking alters a historic property, either directly or indirectly, to a point where the historic integrity is compromised, and the historic property no longer qualifies for listing on the NRHP. Examples of adverse effects are included under 36 CFR 800.5(a)(2) and serve as the foundation for the following analysis of potential adverse effects as they relate to the Undertaking:

**i) Physical destruction of or damage to all or part of the property**

The Undertaking will not result in any physical destruction or damage to all or part of a historic property. All physical work is limited to non-character defining areas at the eastern perimeter of MFA, adjacent to Macon Road, where no historic properties are located. Therefore, the Undertaking will not cause an adverse effect under this criterion.

**ii) Alteration of a property, including restoration, rehabilitation, repair, maintenance, stabilization, hazardous material remediation, and provision of handicapped access, that is not consistent with the Secretary's standards for the treatment of historic properties (36 C.F.R. part 68) and applicable guidelines**

This section includes an analysis of the Undertaking per the *Secretary of the Interior's Standards for Rehabilitation* (Rehabilitation Standards), which allow for the introduction of new elements and compatible uses while also retaining the historic character and features of a property.<sup>3</sup> The analysis of the Undertaking per the ten Rehabilitation Standards is as follows:

1. *A property will be used as it was historically or be given a new use that requires minimal change to its distinctive materials, features, spaces, and spatial relationships.*

The Undertaking will not introduce any new use to the expanded NAS Sunnyvale Historic District. The Undertaking area is limited to a non-character defining area at the eastern perimeter of the MFA property and is set around the existing traffic corridor along Macon Road and currently closed point of entry at 5<sup>th</sup> Avenue, leading towards Enterprise Way in the City of Sunnyvale. The proposed work will reactivate this existing entrance during peak hours, which will connect to the existing circulation routes throughout the historic district via Macon Road. All access improvements associated with the Undertaking are far removed from any contributing property or feature to the historic district and will have no effect on any historic materials, features, or spaces. Additionally, the placement of the upgrades at the perimeter of the property will have no effect on any spatial relationships of the historic district and its contributing properties, primarily those of the airfield.

Therefore, the Undertaking will adhere to Rehabilitation Standard 1.

2. *The historic character of a property will be retained and preserved. The removal of distinctive materials or alteration of features, spaces, and spatial relationships that characterize a property will be avoided.*

The Undertaking will not involve the removal or alteration of any historic materials, features, or spaces associated with a historic property. The proposed upgrades will be located at an area along the

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<sup>3</sup> US Code of Federal Regulations, 36 CFR Section 68.3(b)

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easternmost-edge of MFA, which is a non-character defining area of the property. There are no contributing properties located in the Undertaking area, and, therefore, no alterations to any physical characteristics of the expanded NAS Sunnyvale Historic District will occur.

As for spatial relationships, the proposed work primarily includes at-grade circulation improvements with limited above ground construction. The above-ground built elements – new security fencing, traffic signage, lighting, and the guard stations – will be pedestrian in scale and utilitarian in nature and use. This is all occurring along the easternmost periphery of the historic district, which is located far away from the central character-defining features of the airfield. Additionally, the peripheral location of the Undertaking will not infringe upon the significant connections between the contributing historic buildings and structures, particularly those between Hangar 1 and Hangars 2 and 3. As such, the Undertaking will have no effect on the spatial relationship of the character-defining central airfield of the historic district and its adjacent contributing features.

Therefore, the Undertaking will adhere to Rehabilitation Standard 2.

3. *Each property will be recognized as a physical record of its time, place, and use. Changes that create a false sense of historical development, such as adding conjectural features or elements from other historic properties, will not be undertaken.*

The Undertaking involves the construction of new circulation improvements and the security-controlled reopening of the 5<sup>th</sup> Avenue point of entry at the eastern perimeter of MFA. All of the proposed work is occurring in a peripheral, non-character defining area of the expanded NAS Sunnyvale Historic District that is located far from the central character-defining spaces associated with the airfield and its contributing elements. The new access improvements and associated security elements, such as the guard stations and fencing, will be contemporary in construction and will not create a false sense of historical development. Therefore, the Undertaking will adhere to Rehabilitation Standard 3.

4. *Changes to a property that have acquired historic significance in their own right will be retained and preserved.*

The Undertaking will not adversely affect any property that has gained historic significance in its own right. The project is largely limited to roadway improvements along the non-character defining eastern periphery of the airfield and the existing circulation routes along Macon Road and 5<sup>th</sup> Avenue. This area is defined by a mix of contemporary paved surfaces and undeveloped space and does not appear to exhibit any historic significance associated with the expanded NAS Sunnyvale Historic District. Therefore, the Undertaking will adhere to Rehabilitation Standard 4.

5. *Distinctive materials, features, finishes, and construction techniques or examples of craftsmanship that characterize a property will be preserved.*

No distinctive features, finishes, construction techniques, or examples of craftsmanship will be affected by the Undertaking. All physical work is restricted to non-character defining areas along Macon Road and the eastern perimeter of the MFA property. None of the character-defining features associated with the expanded NAS Sunnyvale Historic District, namely the central airfield site features, will be directly or indirectly affected by the Undertaking. Therefore, the Undertaking will adhere to Rehabilitation Standard

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6. *Deteriorated historic features will be repaired rather than replaced. Where the severity of deterioration requires replacement of a distinctive feature, the new feature will match the old in design, color, texture, and, where possible, materials. Replacement of missing features will be substantiated by documentary and physical evidence.*

The Undertaking will not involve the repair or any other physical treatment of deteriorated historic features. Work is limited to non-contributing areas of the expanded NAS Sunnyvale Historic District, specifically along the eastern most perimeter of the airfield adjacent to Macon Road, with no potential for any direct alterations to contributing site features or properties. Therefore, the Undertaking will adhere to Rehabilitation Standard 6.

7. *Chemical or physical treatments, if appropriate, will be undertaken using the gentlest means possible. Treatments that cause damage to historic materials will not be used.*

The Undertaking will not involve harmful chemical or physical treatments of any historic materials or features belonging to a historic property. Therefore, the Undertaking will adhere to Rehabilitation Standard 7.

8. *Archaeological resources will be protected and preserved in place. If such resources must be disturbed, mitigation measures will be undertaken.*

Previous archaeological studies concluded that this location has a low potential for buried resources. Furthermore, no archaeological resources are known to be located in the areas where below ground disturbances are planned, primarily along the proposed upgrades east of Macon Road and the select areas at the intersection of 5<sup>th</sup> Avenue and Enterprise Way in the City of Sunnyvale. However, if archaeological materials are encountered during the Undertaking, construction will be halted, and the appropriate authorities will be notified immediately. Within the boundaries of MFA, NASA officials, including the Cultural Resource Manager, will be notified, whereas inadvertent discoveries outside the MFA boundaries will be reported to the owners of the roadways and the City of Sunnyvale staff. All efforts will be taken to comply with relevant NASA or City of Sunnyvale procedures. Under these conditions, the Undertaking will adhere to Rehabilitation Standard 8.

9. *New additions, exterior alterations, or related new construction will not destroy historic materials, features, and spatial relationships that characterize the property. The new work shall be differentiated from the old and will be compatible with the historic materials, features, size, scale and proportion, and massing to protect the integrity of the property and its environment.*

The Undertaking will not destroy any historic materials that characterize the expanded NAS Sunnyvale Historic District. The proposed road improvements and guard station will be located at the eastern-most edge of the MFA property, which is considered non-contributing and has no direct associations with the significance of the historic district. Similarly, the peripheral location of the Undertaking is located several thousand feet away from the central character-defining areas of the expanded NAS Sunnyvale Historic District, namely the central airfield, Shenandoah Plaza, and the interstitial spaces between the Hangars

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and associated support buildings. None of the proposed work will detract from the historic character of the historic district.

The majority of the proposed work is located at grade and involves the improvements to the circulation patterns that already exist along Macon Road and the currently deactivated point of entry to MFA at 5<sup>th</sup> Avenue. The new roadways, inspection areas, and intersections will all be clearly contemporary in construction and will be differentiated from the contributing features to the expanded NAS Sunnyvale Historic District. Additionally, the location of these upgrades at the periphery of the property in a non-character defining area, the utilitarian nature of the circulation improvements, and their overall pedestrian scale will be compatible within the overall setting of the historic district.

The few above-ground elements of the Undertaking include the proposed guard stations and associated upgrades, including the proposed light poles, security fencing, and signage. All of these upgrades will be contemporary in construction and clearly differentiated from the contributing elements to the expanded NAS Sunnyvale Historic District. Additionally, all of the proposed elements will be pedestrian in scale and will not visually detract from any of the prominent features of the historic district. The proposed guard stations, which will be the most prominent above-ground elements of the Undertaking, will be single-story prefabricated structures and have a comparable utilitarian material palette to the historic district with concrete, stucco cladding, and metal roofing, similar to other structures found throughout. Furthermore, the guard stations will have a simple rectilinear footprint and simple roofline. Overall, all of these above ground elements will be compatible with the overall utilitarian setting of the expanded NAS Sunnyvale Historic District.

Therefore, the Undertaking will adhere to Rehabilitation Standard 9.

10. *New additions and adjacent or related new construction shall be undertaken in such a manner that, if removed in the future, the essential form and integrity of the historic property and its environment would be unimpaired.*

The Undertaking will have no direct physical effects on any historic property; all significant portions of the expanded NAS Sunnyvale Historic District, including its contributing properties, will remain in their existing condition. As such, the future removal of any element associated with the Undertaking, namely the proposed road improvements, guard station, and security fencing will not impair a historic property in any capacity. Therefore, the Undertaking will adhere to Rehabilitation Standard 10.

### Summary

The Undertaking will adhere to the Standards for Rehabilitation, as described above. Therefore, the Undertaking will not cause an adverse effect under this criterion.

### **iii) Removal of the property from its historic locations**

The Undertaking will not involve the removal of any historic property from its historic location and therefore will not cause an adverse effect under this criterion.

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**iv) Change of the character of the property's use or of physical features within the property's setting that contribute to its historic significance**

The Undertaking will not result in any change to the property's existing use. The proposed work is limited to reactivating the existing, but currently closed, point of entry to MFA from the adjacent City of Sunnyvale, located at 5<sup>th</sup> Avenue. The circulation upgrades associated with this will connect to the existing traffic corridor of Macon Road in non-character defining area of the expanded NAS Sunnyvale Historic District. The Undertaking area is located on the easternmost perimeter of the historic district and is far removed from the main uses of the property, namely the ongoing airfield functions, which will continue in their existing capacity.

For physical features within the setting of the expanded NAS Sunnyvale Historic District, the Undertaking will result in no changes. The peripheral placement of the Undertaking is far removed from any of the contributing properties or landscape features, including the character-defining central portion of the airfield. As such, the integral view corridors throughout the airfield and spatial relationships between the various contributing properties that define the overall character of the district will be retained in their existing condition. Additionally, the nature of the at-grade improvements, the pedestrian scale of the above-ground built elements of the Undertaking, and the reactivation of the existing point of entry will not result in new element that will impact the integrity of setting for the expanded NAS Sunnyvale Historic District. The setting of the historic district will be retained in its existing condition.

Therefore, the Undertaking will not cause an adverse effect under this criterion.

**v) Introduction of visual, atmospheric, or audible elements that diminish the integrity of the property's significant historic features.**

Atmospheric and audible effects will be primarily associated with the construction of the access improvements of the Undertaking. These effects will be temporary and will not have any long-term effects beyond the construction period. In its existing condition, the area is largely serving as a circulation corridor along Macon Road. While the reopening of the 5<sup>th</sup> Avenue gate will shift traffic patterns at peak times toward this area of the property from the southern Ellis Gate entrance, this use is consistent with the existing conditions along Macon Road near 5<sup>th</sup> Avenue and will not affect the use of the expanded NAS Sunnyvale Historic District in a way that will depart from the existing atmospheric or audible conditions.

In terms of potential visual effects, the entirety of the Undertaking is occurring at the eastern periphery of the MFA property and the expanded NAS Sunnyvale Historic District. This placement is far removed from the central part of the district, namely the character-defining expanses of the airfield and the established visual corridors between Hangar 1 and Hangars 2/3, and along the length of the runways towards San Francisco Bay. The Undertaking is predominantly defined by at-grade circulation improvements, which will have no visual impact on the historic district. The few above-ground elements of the Undertaking include proposed security fencing, traffic signage, lighting, and the guard station(s). These are all relatively small in size and are located in a non-character defining area at the periphery of the property. Additionally, these above-ground elements are located over 1,000' away from the primary visual corridors and contributing airfield features of the expanded NAS Sunnyvale Historic District, which will be retained in their existing condition and with no effect on the historical integrity of the property.

Therefore, the Undertaking will not cause an adverse effect under this criterion.

**Reference:** Section 106 Technical Memorandum for the proposed 5<sup>th</sup> Avenue Gate Reopening & MFA Access Improvements Project

**vi) Neglect of a property which cause deterioration, except where such neglect and deterioration are recognized qualities of a property of religious and cultural significance to an Indian tribe or Native Hawaiian organization**

The Undertaking will not involve the neglect of a property that causes its deterioration and therefore will not cause an adverse effect under this criterion.

**vii) Transfer, lease, or sale of a property out of Federal ownership or control without adequate and legally enforceable restrictions or conditions to ensure long-term preservation of the property's historic significance.**

The Undertaking will not involve the transfer, lease, or sale of a property out of Federal ownership or control and therefore will not cause an adverse effect to historic properties under this criterion.

## **CONCLUSION**

The Undertaking, which involves the reopening of the 5<sup>th</sup> Avenue gate at MFA and the installation of associated infrastructure upgrades, will not have the potential to alter, directly or indirectly, any of the characteristics that qualify a historic property for inclusion in the NRHP. Following the analysis of the Undertaking using the Criteria of Adverse Effect, outlined in 36 CFR Part 800.5(b), it is determined that the Undertaking will result in no adverse effects on any historic properties. Therefore, Stantec recommends a finding of No Adverse Effects.

**Stantec Consulting Services, Inc.**



**Dan Herrick** MHC  
Architectural Historian

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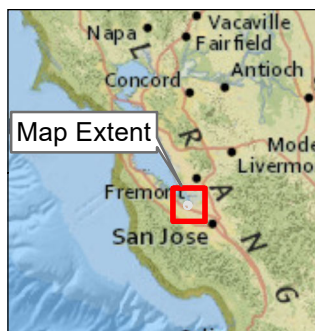
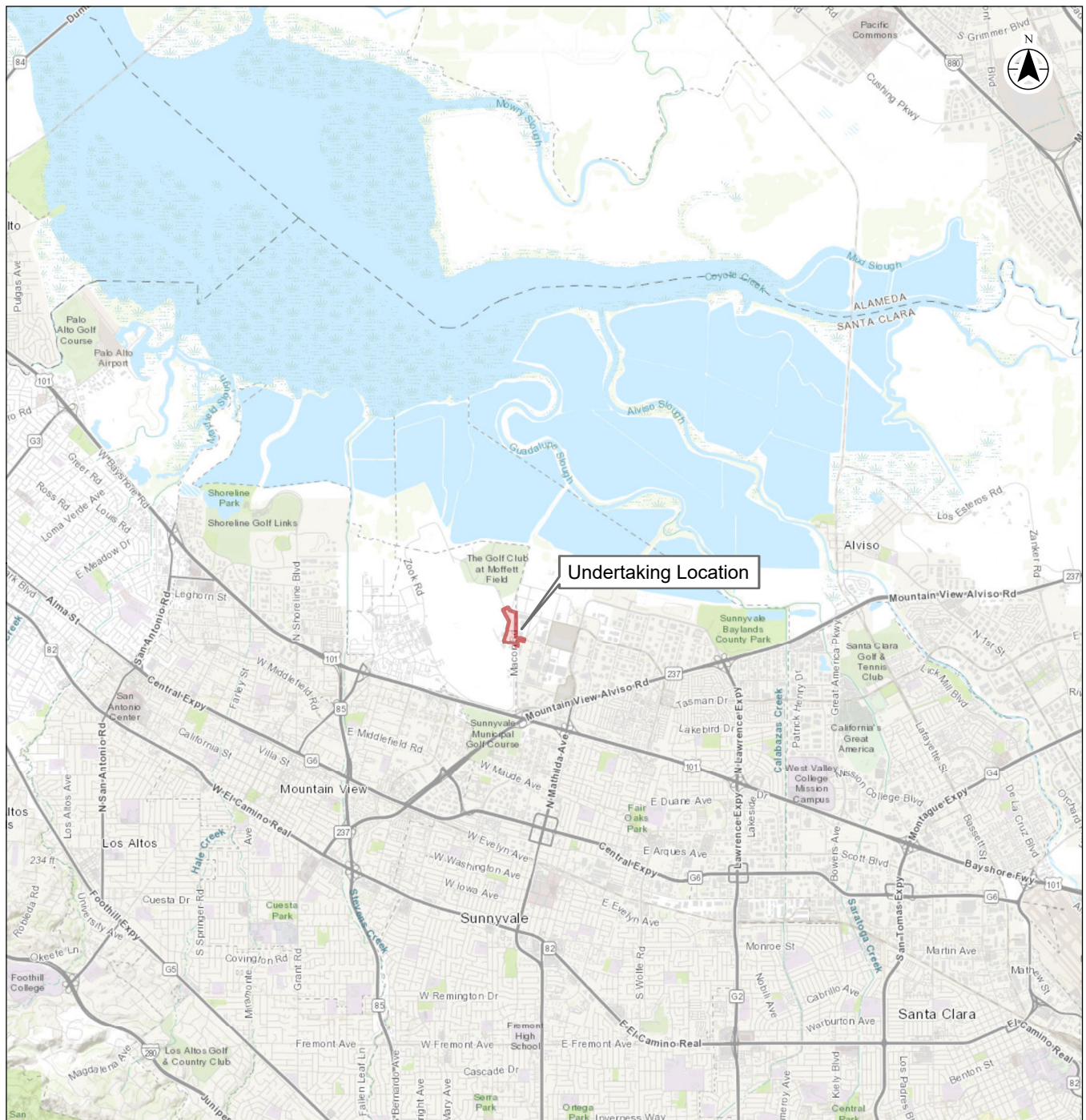
Attachment: Appendix A: Undertaking Maps  
Appendix B: Site Photographs  
Appendix C: Selected Drawings

c. Garret Root, Senior Architectural Historian  
Michelle Cross, RPA, Cultural Resources Practice Leader

April 17, 2019  
Jonathan Ikan, Cultural Resource Manager

**Reference:**            **Section 106 Technical Memorandum for the proposed 5<sup>th</sup> Avenue Gate Reopening & MFA Access Improvements Project**

## **APPENDIX A: UNDERTAKING MAPS**



Undertaking Area of Potential Effects (APE)

0 1 2 Miles  
1:100,000 (at original document size of 8.5x11)



Project Location 204530317  
T06.05, R02.0W, Sec 11-14 Prepared by WC on 2019-02-14  
USGS 7.5min Quad: Technical Review by XX on 2019-02-14  
Mountain View Independent Review by DH on 2019-02-14

Client/Project

Planetary Ventures  
G-Bus Electrical Charging Stations

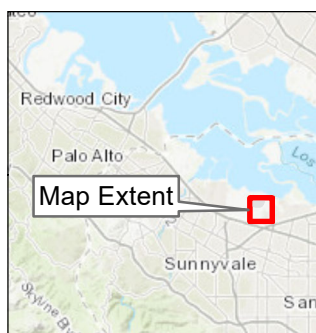
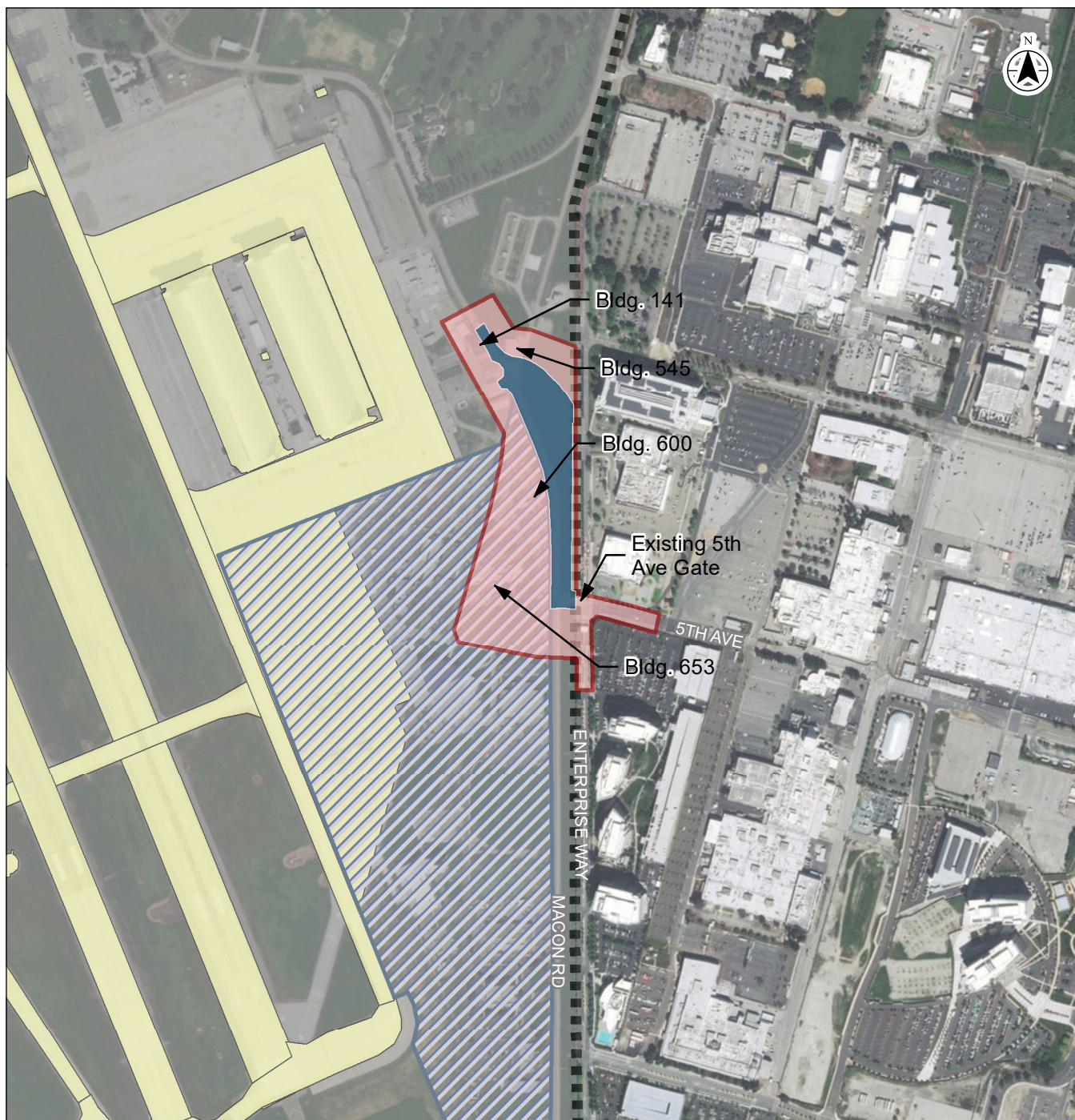
Figure No.  
1

Title

**Undertaking Location**

**Notes**

1. Coordinate System: NAD 1983 StatePlane California II  
FPS 0402 Feet
2. Service Layer Credit: Esri online services, Nov. 2018



**Notes**  
 1. Coordinate System: NAD 1983 StatePlane California II FIPS 0402 Feet  
 2. Service Layer Credit: Esri online services, Feb. 2019

- Area of Potential Effects (23.89 acres)
- Undertaking Area
- CAANG Cantonment Area
- Expanded NAS Sunnyvale Historic District
- Contributor to the Expanded NAS Sunnyvale Historic District

0 500 1,000 Feet  
 1:10,000 (at original document size of 8.5x11)

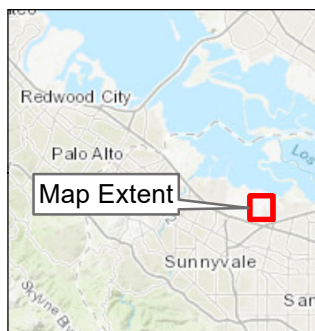
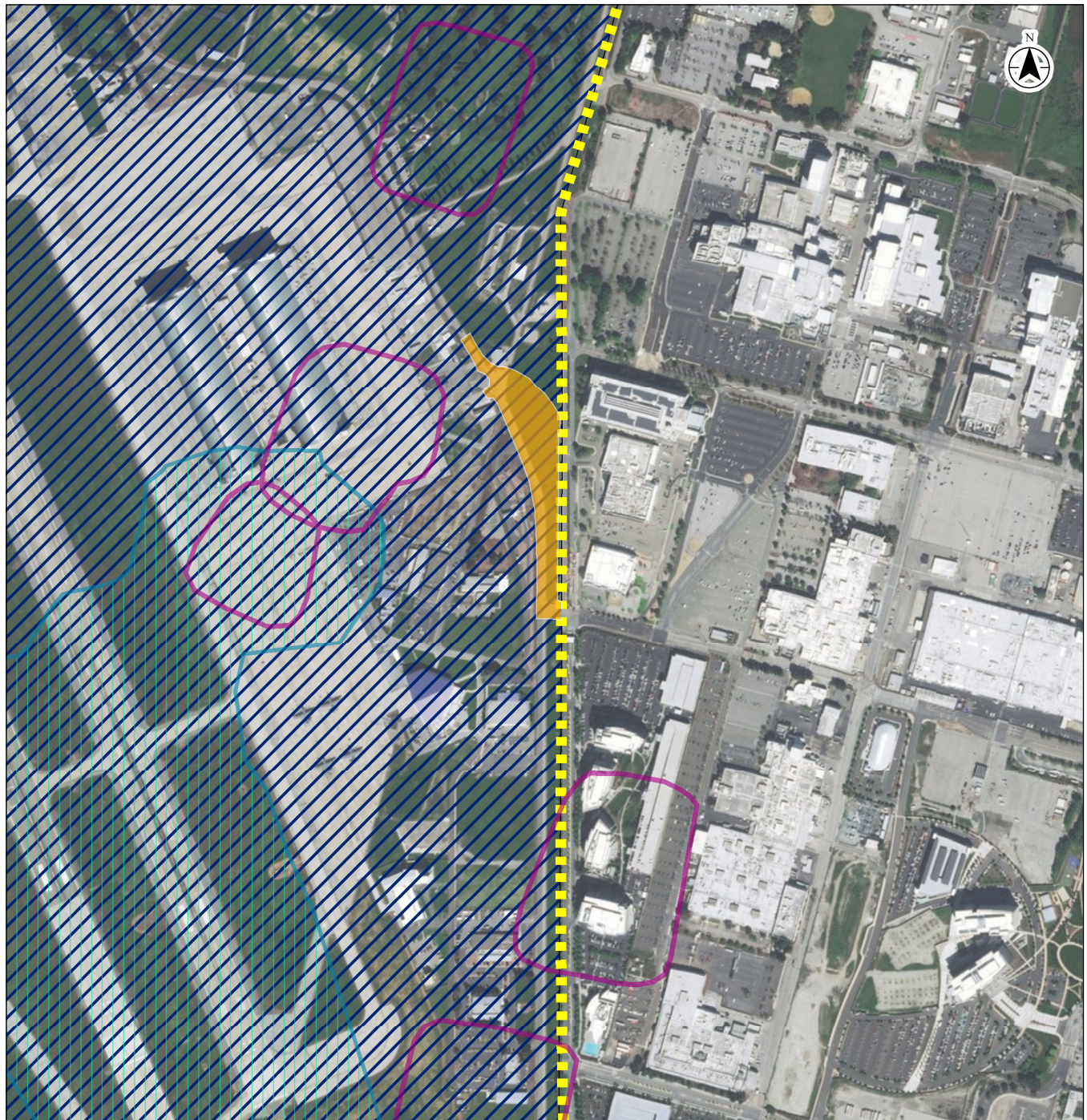


Project Location: 204530317  
 106.05, R02.0W, Sec 11-14 Prepared by WC on 2019-02-26  
 USGS 7.5min Quad: Technical Review by JD on 2019-02-14  
 Mountain View Independent Review by DH on 2019-02-14

Client/Project:  
 Planetary Ventures  
 5th Avenue Gate Reopening & MFA  
 Access Improvements

Figure No.  
**2**  
 Title

## Section 106 - Area of Potential Effects



**Notes**  
 1. Coordinate System: NAD 1983 StatePlane California II FIPS 0402 Feet  
 2. Service Layer Credit: Esri online services, Feb. 2019

- Boundary of NASA Ames Research Center
- Undertaking Area
- Heightened Historic-era Archaeological Sensitivity
- Heightened Prehistoric-era Archaeological Sensitivity
- Low Archaeological Sensitivity

0 500 1,000 Feet  
 1:10,000 (at original document size of 8.5x11)



Project Location: 204530317  
 T06.05, R02.0W, Sec 11-14 Prepared by WC on 2019-03-10  
 USGS 7.5min Quad: Technical Review by XX on 2019-03-10  
 Mountain View Independent Review by DH on 2019-03-11

Client/Project:  
 Planetary Ventures  
 5th Avenue Gate Reopening & MFA  
 Access Improvements

Figure No.  
**3**  
 Title

**Undertaking & Established Areas of Archaeological Sensitivity**



April 17, 2019  
Jonathan Ikan, Cultural Resource Manager

**Reference:**           Section 106 Technical Memorandum for the proposed 5<sup>th</sup> Avenue Gate Reopening & MFA Access Improvements Project

## **APPENDIX B: SITE PHOTOGRAPHS**



**Figure 1: Existing 5<sup>th</sup> Avenue entrance and gate to MFA, looking northwest towards Macon Road from intersection at Enterprise Way.**



**Figure 2: Existing 5<sup>th</sup> Avenue entrance and gate to MFA, looking west along 5<sup>th</sup> Avenue in Sunnyvale, California.**



**Figure 3: Looking north along Undertaking Area from 5<sup>th</sup> Avenue extension within MFA, parallel to Macon Road (left).**



**Figure 4: Undertaking area, looking south from the 5<sup>th</sup> Avenue extension within MFA, parallel to Macon Road (right).**



**Figure 5: North end of Undertaking area along Macon Road at existing Fuel Farm Facility, looking northwest.**



**Figure 6: North end of Undertaking area, looking south from intersection of Macon and E. 5<sup>th</sup> Patrol Roads**



April 17, 2019  
Jonathan Ikan, Cultural Resource Manager

**Reference:**           Section 106 Technical Memorandum for the proposed 5<sup>th</sup> Avenue Gate Reopening & MFA Access Improvements Project

## **APPENDIX C: SELECT DRAWINGS**

**The following content was redacted from this public posting:**

Appendix C  
Selected Drawings